Lion Elastomers LLC

1615 Main Street • P.O. Box 667 • Port Neches, TX 77651
800 / 535-9960 • www.lionelastomers.com

SBR 1789 Elastomer Product Data

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with 37.5 parts of low Polycyclic Aromatic Hydrocarbon RAE oil. SBR 1789 contains a higher level of bound styrene than SBR 1712. It was developed for tire applications.

Unique Features

- Cold polymerized styrene-butadiene elastomer
- Higher bound styrene & RAE oil extended

Applications

- Passenger & heavy-service treads
- Retread rubbers and bicycle tires

Typical Properties

Property	Test Method	Typical
Bound Styrene, Weight % ……..	ASTM D5775	39.0 – 41.0
Mooney viscosity, MML 1+4 (100˚C) ……	ASTM D1646	47 - 57
Oil, Weight % ……..	ASTM D5774	25.8 – 28.8
Oil Type ……..	RAE	
Organic acid, Weight % ……..	ASTM D5774	3.5 – 5.9
Soap, Weight % ……..	ASTM D5774	0.5 Max.
Ash, Weight % ……..	ASTM D5667	0.70 Max.
Volatile matter, Weight %	ASTM D5668	0.75 Max.
Emulsifier ……..	—	Mixed acid
Coagulant ……..	—	Acid or Salt Acid
Stabilizer ……..	—	Staining
Specific gravity, g/cc (bale)…..……..	—	0.95
Physical form*, lbs/bale ……..	—	80.0 (36 kg)

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with an RAE oil, and containing a higher level of bound styrene. It is recommended for applications such as passenger and heavy-service treads, retread rubbers, and bicycle tires.

* This product is available in 80 lb rectangular bales individually wrapped in 1.5 mil, low melting point film and shipped in returnable aluminum OTD.

Note: *Antioxidant is added to this polymer to provide protection during manufacture and storage. The end user's process may require additional antioxidant protection.*

SBR 1789 Elastomer

Rheometric Properties (MDR 2000 rheometer)

Test Method – ASTM D5289**

Property	**Result**
M_L lbf-in	1.2 – 3.2
dN-m	1.4 – 3.6
M_H lbf-in	10.3 – 14.3
dN-m	11.7 – 16.2
t_s 1, minutes	3.2 – 5.2
t' 50, minutes	7.2 – 11.2
t' 90, minutes	13.7 – 18.7

Test Formula (ASTM D3185 2B)	**Quantity, Parts by Mass**	**Material**
SBR 1789 oil-extended elastomer	137.50	
Zinc oxide	3.00	IRM 91A
Sulphur	1.75	IRM 031
Stearic acid	1.00	IRM 021
Oil furnace black	68.75	IRB #8
TBBS	1.38	IRM 003

**160°C, 1°Arc

SBR 1789 is an environmentally friendly version of SBR 1712 replacing aromatic extender oil with RAE oil, and containing a higher level of bound styrene. Applications include passenger and heavy-service treads, retread rubbers, and bicycle tires.